

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
30 June 2005 (30.06.2005)

PCT

(10) International Publication Number  
**WO 2005/059832 A1**

(51) International Patent Classification<sup>7</sup>: **G06T 5/00**, 7/20

(FR). BARBA, Dominique [FR/FR]; 4, rue des Ecureuils,  
F-44470 Carquefou (FR).

(21) International Application Number:

PCT/EP2004/053471

(74) Agents: **LE DANTEC, Claude** et al.; THOMSON, 46,  
Quai Alphonse Le Gallo, F-92100 Boulogne-Billancourt  
(FR).

(22) International Filing Date:

14 December 2004 (14.12.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

03293216.2 18 December 2003 (18.12.2003) EP

(71) Applicant (for all designated States except US): **THOM-  
SON LICENSING SA** [FR/FR]; 46, Quai Alphonse Le  
Gallo, F-92100 Boulogne-Billancourt (FR).

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

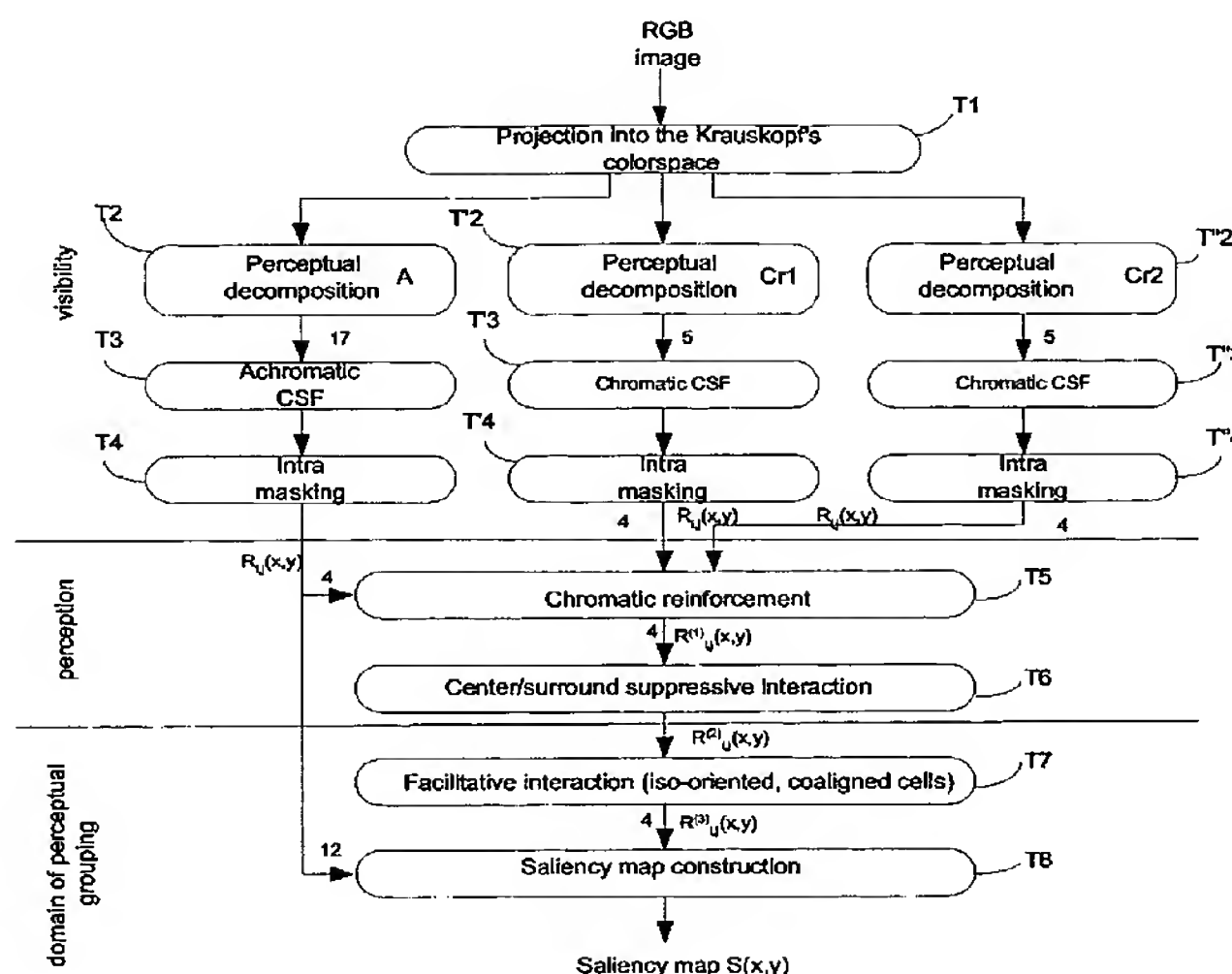
(72) Inventors; and

(75) Inventors/Applicants (for US only): **LE MEUR, Olivier**  
[FR/FR]; La Souche, F-35160 Talensac (FR). **THOREAU,**  
**Dominique** [FR/FR]; 39 rue du Réage, F-35510 Cesson  
Sévigné (FR). **FRANCOIS, Edouard** [FR/FR]; 18 allée du  
Locar, F-35890 Bourg des Comptes (FR). **LE CALLET,**  
**Patrick** [FR/FR]; 4 bis rue de St Etienne, F-44330 Le Pallet

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,

[Continued on next page]

(54) Title: DEVICE AND METHOD FOR CREATING A SALIENCY MAP OF AN IMAGE



(57) Abstract: The invention concerns a device and a method for creating a saliency map of an image. It comprises the steps of: Projection (E1) of said image according to the luminance (A) component and if said image is a color image, according to the luminance (A) component and according to the chrominance components (Cr1, Cr2); Perceptual sub-bands decomposition (E3, T2, T'2, T''2) of said components (A, Cr1, Cr2) according to the visibility threshold of a human eye; Extraction (E7) of the salient elements of the sub-bands related to the luminance (A) component; Contour enhancement (E8, T7) of said salient elements in each sub-band related to the luminance (A) component; Calculation (T7) of a saliency map from the contour enhancement, for each sub-band related to the luminance (A) component. Creation (T8) of the saliency map as a function of the saliency maps obtained for each sub-band.



SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**Published:**

- *with international search report*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*